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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MANNING, JOHN

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/735,816

Applicant(s)

BAHRAINI ET AL.

Examiner

John Manning

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see Page 4-10, filed August 23, 2005, with respect to the rejection(s) of claim(s) 1-14 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kostreski et al (US Pat No 5,734,589).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kostreski et al.

In regard to claim 1, the claimed steps of "transmitting a signal on an out-of-band channel to be received by the set top box, the signal indicating an in-band service channel frequency" and "receiving the signal at the set top box to identify the in-band service channel frequency" are met by Figures 3 and 4. "The digital communication link may be established by a downstream, broadband channel or an out of band signaling channel" (Col 4, Lines 45-48). "The terminal may be programmed to download channel map data that identifies broadcast VIPs available on the network platform, as well as services provided by the respective VIPs. The program memory stores the software

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control signals received over an identified provider's broadcast channel as software executable by the control processor" (Col 4, Lines 22-28). "In the network of FIG. 3 signal transport over the fiber/coax distribution system may be out of band. The interactive network interface components in the NIM 101 provide communication facilities between the terminal and the central office. The physical layer interface comprises either a 64 QAM in-band transport multiplex receiver or the frequency agile QPSK out-of-band receiver 513 illustrated in FIG. 4. A QPSK transmitter 515 relays the upstream signal over the 8-12 MH band on the coaxial drop. The medium access control and administrative functions are performed by the network controller 323 and the video manager 417. Together these elements provide a message transfer facility for interactive traffic between the central office and the DET" (Col 25, Lines 61-67; Col 26, Lines 1-6; Also see Col 15, Lines 15-64). The claimed step of "receiving signals over the in-band service channel frequency to initialize the set top box" is met by Figure 4. "With the present invention the DET receives and stores downloaded control software. The DET can establish a link to the network via a level 1 gateway session to receive operation systems code, default channel maps, and permissions tables in order to receive broadcast services from multiple VIPs. In some cases, the DET may also establish a point to point link to a VIP's interactive equipment. For broadcast services, the DET captures a cyclically broadcast application. These software downloading features are discussed in more detail below in the context of preferred DET and network implementations" (Col 6, Lines 35-46). The claimed step of "identifying the set top box to the cable system by transmitting signals from the set top box via a return path" is met

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by Figures 3 and 4. "Alternatively, for interactive services, the DET may transmit a unique identification code with the upstream message" (Col 21, Lines 3-5).

In regard to claim 4, Kostreski discloses that the in-band channel is at least within the range of 100 MHz and 800 MHz (Col 25, Lines 33-35).

In regard to claim 5, in the Kostreski reference, a "trace and routing" message is sent on an out-of-band channel that contains the in-band service channel frequency parameters and a "flag" which indicated the presence of the in-band signal. "A program association table (packet PID 0) maps each program source with the PID value associated with a program map related to that source. Thus, the program association table defines the packet location in the transport stream of a program map for each source of programming in the transport stream. The program map, in turn, specifies the PID values for packets continuing video, audio and/or data from the particular source. For example, the program map for CBS might be found in packets corresponding to PID 132; the program map for NBC might be found in packets identified by PID 87 and so forth. The program map for CBS in the packet with PID 132 would then identify the PID numbers for the actual packetized elementary streams (PES) for the video and audio channels associated with the CBS program" (Col 7, Lines 61-67; Col 8, Lines 1-8).

4. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al.

In regard to claim 6 the Kostreski reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the use of UDP/IP packets. However, the examiner gives

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OFFICIAL NOTICE that it is notoriously well known in the art to use UDP/IP packets so as to provide the head-end with user/set top box identification. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Kostreski reference with UDP/IP packets so as to provide the head-end with user/set top box identification.

In regard to claim 10, the combined teaching does not explicitly disclose the frequency sweeping of the out-of-band frequency range. The applicant states that the use of frequency sweeping of the in-band frequency range so as to locate the control signal is widely known and used in the art. Accordingly, it would have been clearly obvious to one of ordinary skill in the art to implement Kostreski with the frequency sweeping of the out-of-band frequency range so as to locate the control signal.

5. Claims 7-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al. in view of Hendricks et al. (US Pat No 5,990,927).

In regard to claims 7 and 8, Kostreski fails to explicitly disclose the step of authorizing a digital access controller before or after the step of transmitting the out-of-band control signal. Hendricks et al. reference teaches the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services (Col 9, Lines 30-65). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement Kostreski with the initialization or configuration, by the digital access controller or the network controller

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214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

In regard to claim 9, Kostreski fails to explicitly disclose the step of pre-loading application software into the set top box. Hendricks et al. reference teaches that the network controller 214 can provide the set top box with "pre-loaded application software" or advance programming as well as "on the fly programming" so as to provide the set top box with software necessary for performing desired functions (Col 9, Lines 50-65; Col 10, Lines 48-68). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement Kostreski with the step of pre-loading application software into the set top box so as to provide the set top box with software necessary for performing desired functions.

In regard to claim 11, in the Kostreski reference, a "trace and routing" message is sent on an out-of-band channel that contains the in-band service channel frequency parameters and a "flag" which indicated the presence of the in-band signal as discussed for claim 5. The message is decoded before the set top box tunes to the designated channel. The reference fails to explicitly disclose the digital access controller connected to a billing system. The Hendricks et al. reference teaches the digital access controller connected to a billing system so as to maintain accurate account and billing information. Network "controller 214, the cable headend 208 performs the system control functions for the system. The primary function of the network controller 214 is to manage the configuration of the set top terminals 220 and process signals received from the set top terminals 220. In the preferred embodiment, the network controller 214 monitors,

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among other things, automatic poll-back responses from the set top terminals 220 remotely located at each subscribers' home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller 224 to maintain accurate account and billing information as well as monitor authorized channel access. In the simplest embodiment, information to be sent to the network controller 224 will be stored in RAM within each subscriber's set top terminal 220 and will be retrieved only upon polling by the network controller 214. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller 214 allows the system to maintain complete information on all programs watched using a particular set top terminal 220." (Col 9, Lines 30-50). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Kostreski reference with the digital access controller connected to a billing system so as to maintain accurate account and billing information.

In regard to claim 12, Kostreski discloses "determining a return path channel frequency after determining the in-band service channel frequency" as discussed for claim 1 (Kostreski: Col 21, Lines 3-5).

6. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al. in view of the Data-Over-Cable Service Interface Specification (SP-RFI-104-980724).

In regard to claim 2, Kostreski fails to explicitly disclose the use of a DOCSIS in-band channel. However, the Data-Over-Cable Service Specification teaches its use so as to facilitate design and field-testing leading to the early manufacturability and



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interoperability of conforming hardware by multiple vendors (Page 1). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Kostreski reference with a DOCSIS channel for the stated advantage.

7. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al. in view of the Digital Audio-Visual Council Specification (DAVIC 1.3.1 Part 1).

In regard to claim 3, Kostreski fails to explicitly disclose the use of a DAVIC in-band channel. However, the Digital Audio-Visual Council Specification teaches its use so as to provide end-to-end interoperability across countries, applications, and services. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Kostreski reference with DAVIC channel for the stated advantage.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al. in view of Hendricks et al. and further in view of the Data-Over-Cable Service Interface Specification.

In regard to claim 13, Kostreski fails to explicitly disclose the use of a DOCSIS in-band channel. However, the Data-Over-Cable Service Specification teaches its use so as to facilitate design and field-testing leading to the early manufacturability and interoperability of conforming hardware by multiple vendors (Page 1). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Kostreski reference with a DOCSIS channel for the stated advantage.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al. and further in view of the Digital Audio-Visual Council Specification.

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In regard to claim 14, Kostreski fails to explicitly disclose the use of a DAVIC in-band channel. However, the Digital Audio-Visual Council Specification teaches its use so as to provide end-to-end interoperability across countries, applications, and services. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Kostreski reference with DAVIC channel for the stated advantage.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 571-272-7352. The examiner can normally be reached on M-F: 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JM

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November 7, 2005



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